

## REMARKS

Claims 1 to 35 are pending in the application. Claims 13-17, 25-31, and 33-35 are rejected. Claims 1-12 and 18-24 are withdrawn from consideration. Claim 32 is objected to. Claims 17, and 25-28, and 34 are hereby canceled. Claim 13 is hereby amended.

### The Rejections

#### 35 U.S.C. 102(b) – Lindquist et al. (U.S. Patent No. 3,665,918)

Claims 13-15, 17, 25-28, 31, 34, and 35 are rejected as being anticipated by Lindquist et al. (U.S. Patent No. 3,665,918) (referred to hereinafter as “Lindquist”).

The Office Action essentially states, in part:

#### Claims 13-15, 17, 34 and 35:

Lindquist is directed to breathable pressure-sensitive adhesive tapes comprising thermoplastic polyurethane foams (or styrene-butadiene foams or rubber based foams) having a porous pressure sensitive adhesive applied to one surface and having a porous plastic backing film applied to the opposite surface. The thermoplastic polyurethane foam of Lindquist reads on Applicant’s thermoplastic, amorphous polymer and Applicant’s foam layer comprised of a pressure sensitive adhesive polymer. The foams of Lindquist are produced as sheets, and therefore, inherently have a major longitudinal surface. Because pores are three-dimensional, they are inherently perpendicular to at least one side of the sheet of foam in which they are a part. Applicant’s specification reveals that porosity and breathability are equivalent at page 3, lines 1-3. Therefore, because Lindquist is a breathable foam and inherently has porosity in a direction perpendicular to at least one major surface, Lindquist also must have breathability in a direction perpendicular to at least one major surface. The foams of Lindquist have a thickness of about 0.001 to 0.025 inches, which reads on Applicant’s thickness of about 86 to about 265 microns.

With regard to the process limitations of Claims 13 and 34, the blowing agent claimed by Applicant is not present in the final product and therefore the presence of the blowing agent in the intermediate product is not given patentable weight with regard to the final product. Also, it is the Examiner’s position that the breathable foam of Lindquist is identical to or only slightly different than the breathable foam layer prepared by the method of the claim(s), because both breathable

foams may be comprised of the same thermoplastic polyurethane, both have at least one major surface, both inherently have porosity in a direction perpendicular to a major surface, and both breathable foams have thicknesses within the same range. The breathable foam of Lindquist either anticipated or strongly suggested the claimed subject matter.

Lindquist does not specifically disclose that stretching can increase the moisture vapor transition rate of their breathable foam. However, it appears that the breathable foam of Lindquist is substantially identical to the presently claimed breathable foam layer. Thus, it is believed by the Examiner that the moisture vapor transition rate of the breathable foam of Lindquist inherently increases when stretched. Additionally, the presently claimed moisture vapor transition rate would have obviously been present once the breathable foam of Lindquist is provided.

Applicants submit that the Examiner is incorrect in classifying the polyurethane foams of Lindquist as thermoplastics. Lindquist teaches that its foams are made with a crosslinker. *See* Lindquist, col. 4, lines 32-49, especially line 39. Further, Linquist teaches compressing its polyurethane sheets between heated platens at a temperature of 350°F to 800°F, or by using heated rollers. (Lindquist, col. 4, line 71 to col. 5, line 2). If a thermoplastic material were subjected to these conditions, it would melt, resulting a film rather than a porous foam.

Additionally, Applicants have amended claim 13 to add the limitation that foam cells are ruptured or enlarged by stretching the formed article thereby permanently increasing the moisture vapor transition rate of the article. This amendment is supported by the specification, for example, at p. 8, line 30 to p. 9, line 4.

Lindquist does not disclose a foam made of a thermoplastic material having foam cells that are ruptured or enlarged by stretching the formed article thereby permanently increasing the moisture vapor transition rate of the article. Accordingly, the reference does not describe every element of the claimed invention.

Applicants have cancelled claim 34.

Based on the foregoing, Applicant(s) submit that the cited reference cannot support a 35 U.S.C. 102(b) rejection and respectfully requests that the rejection be withdrawn.

35 U.S.C. 102(e) – Walther (U.S. Patent No. 5,905,097)

Claims 13-17 and 34-35 are rejected under 35 U.S.C. 102(e) as anticipated by Walther (U.S. Patent No. 5,905,097) (referred to hereinafter as "Walther").

Walther is directed to the production of breathable foams comprised of styrene-butadiene block copolymers. This reads on Applicant's specific thermoplastic, amorphous polymer and Applicant's foam layer comprised of a pressure sensitive adhesive polymer. The foams of Walther are produced as sheets, and therefore, inherently have a major longitudinal surface. Because pores are three-dimensional, they are inherently perpendicular to at least one side of the sheet of foam in which they are a part. Walther discloses thicknesses between about 76 and about 305 microns (Example 4 Table) which are within Applicant's presently claimed range. The glass transition temperature of styrene-butadiene block copolymers is inherently less than 20°C. Walther discloses depositing the breathable foam onto a metal surface. This reads on an article having at least two layers, one of the layers being nonporous.

It is the Examiner's position that the breathable foams of Walther are identical to or only slightly different than the breathable foam layer prepared by the method of the claim(s), because both breathable foams may be comprised of the same thermoplastic amorphous styrene-butadiene block copolymer, both have at least one major surface, both inherently have porosity in a direction perpendicular to a major surface, and both breathable foams have thicknesses within the same range.

Walther does not specifically disclose that stretching can increase the moisture vapor transition rate of their breathable foam. However, it appears that the breathable foam of Walther is substantially identical to the presently claimed breathable foam layer. Thus, it is believed by the Examiner that the moisture vapor transition rate of the breathable foam of Walther inherently increases when stretched. Additionally, the presently claimed moisture vapor transition rate would have obviously been present once the breathable foam of Walther was provided. See *In re Best*, 195 USPQ 433 footnote 4 (CCPA 1977) as to the providing or this rejection under 35 USC 102 as well as 35 USC 103.

Applicants submit that "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP

2131 (citing *Verdegaal Bros. V. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)).

Applicants have amended claim 13 to add the limitation that foam cells are ruptured or enlarged by stretching the formed article thereby permanently increasing the moisture vapor transition rate of the article.

Walther does not disclose a foam made of a thermoplastic material having foam cells that are ruptured or enlarged by stretching the formed article thereby permanently increasing the moisture vapor transition rate of the article. Accordingly, the reference does not describe every element of the claimed invention.

Applicants have cancelled claim 34.

Based on the foregoing, Applicant(s) submit that the cited reference cannot support a 35 U.S.C. 102(e) rejection and respectfully requests that the rejection be withdrawn.

35 U.S.C. 103(a) – Lindquist et al. (U.S. 3,665,918)

Claims 13-15, 17, 25-28, 31, 34, and 35 are rejected as being obvious over Lindquist et al. (U.S. Patent No. 3,665,918) (referred to hereinafter as “Lindquist”).

The Office Action bases this rejection on the same arguments as stated above for the 102(b) rejection based on Lindquist.

Applicants submit that according to MPEP 2142, to establish a case of prima facie obviousness, three basic criteria must be met: 1) there must be some suggestion or motivation, either in the references or generally known to one of skill in the art, to modify or combine reference teachings, 2) there must be reasonable expectation of success, and 3) the prior art references must teach or suggest all the claim limitations. The ability to modify the method of the references is not sufficient. The reference(s) must provide a motivation or reason for making the changes. *Ex parte Chicago Rawhide Manufacturing Co.*, 226 USPQ 438 (PTO Bd. App. 1984).

Applicants respectfully submit that Lindquist cannot support a case of *prima facie* obviousness as to the claims because, among other possible reasons, it does not provide a motivation or suggestion for, nor does it describe all the elements of, a thermoplastic material having foam cells that are ruptured or enlarged by stretching the formed article thereby permanently increasing the moisture vapor transition rate of the article.

Applicants have cancelled claim 34.

For these reasons, Applicant(s) submit that the cited references will not support a 103(a) rejection of the claimed invention and request that the rejection be withdrawn.

35 U.S.C. 103(a) – Walther (U.S. Patent No. 5,905,097)

Claims 13-17 and 34-35 are rejected under 35 U.S.C. 103(a) as obvious over Walther (U.S. Patent No. 5,905,097) (referred to hereinafter as “Walther”).

The Office Action bases this rejection on the same arguments as stated above for the 102(e) rejection based on Walther.

Applicants submit that Walther cannot support a case of *prima facie* obviousness as to the claims because, among other possible reasons, it does not provide a motivation or suggestion for, nor does it describe all the elements of, a thermoplastic material having foam cells that are ruptured or enlarged by stretching the formed article thereby permanently increasing the moisture vapor transition rate of the article.

Applicants have cancelled claim 34.

For these reasons, Applicant(s) submit that the cited references will not support a 103(a) rejection of the claimed invention and request that the rejection be withdrawn.

35 U.S.C. 103(a) – Lindquist et al. (U.S. 3,665,918) and Pufahl (U.S. 4,169,184)

Claims 29, 30, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindquist et al. (U.S. 3,665,918) in view of Pufahl (U.S. 4,169,184).

The Office Action essentially states:

As set forth above, Lindquist teaches a breathable thermoplastic foam layer B having at least one major surface having at least one ruptured cell having a thickness of about 86 to about 265 microns, and having breathability in a direction perpendicular to a major surface of the foam.

Lindquist also teaches applying a porous pressure-sensitive adhesive coating to one side of the breathable thermoplastic foam layer B. The porous pressure-sensitive adhesive of Lindquist reads on Applicant's A layer comprised of an unfoamed material that is ruptured at, or near, the site of the ruptured cells in the foam layer. Lindquist discloses the use of styrene-butadiene foams, which reads on Applicant's thermoplastic elastomer B layer.

Lindquist, however, does not disclose an ABA structure. Pufahl is directed to an adhesive tape comprising a flexible, open-cell polyurethane foam having pressure-sensitive adhesives applied to both surfaces of the foam. This reads on Applicant's ABA structure. Therefore, it would have been obvious to the skilled artisan at the time this invention was made to combine the teachings of Lindquist and Pufahl because it is well known in the art of adhesive tapes, to apply pressure-sensitive adhesive layers to both sides of a backing material.

Lindquist does not disclose applying a material to at least one A layer. Pufahl teaches applying a release tape to the outer surface of their pressure-sensitive adhesive layer. The release tape of Pufahl prevents the adhesive from sticking to undesired materials prior to use. Therefore, it would have been obvious to the skilled artisan at the time this invention was made to apply a release liner to the pressure-sensitive adhesive layer A of Lindquist, motivated by the desire to prevent the adhesive tape from sticking to itself or another undesired object during storage, or prior to use.

Applicants respectfully submit that the references cannot support a case of *prima facie* obviousness as to the claims because, among other possible reasons, the Lindquist does not provide a motivation or suggestion for using a thermoplastic foam, as explained above. The references also do not disclose all the elements of the present invention.

For these reasons, Applicant(s) submit that the cited references will not support a 103(a) rejection of the claimed invention and request that the rejection be withdrawn.

In addition to the foregoing arguments, Applicant(s) submit that a dependent claim should be considered allowable when its parent claim is allowed. *In re McCain*, 101 USPQ 411 (CCPA 1954). Accordingly, provided the independent claims are allowed, all claims depending therefrom should also be allowed.

Based on the foregoing, it is submitted that the application is in condition for allowance. Withdrawal of the rejections under 35 U.S.C. 102 (b), 102(e), and 103(a) is requested. Examination and reconsideration of the claims are requested. Allowance of the claims at an early date is solicited.

The Examiner is invited to contact Applicant(s)' attorney if the Examiner believes any remaining questions or issues could be resolved.

Respectfully submitted,

December 23, 2002

Date

By: Melanie Gover

Melanie Gover, Reg. No.: 41,793

Telephone No.: 651-736-6432

Office of Intellectual Property Counsel  
3M Innovative Properties Company  
Facsimile No.: 651-736-3833

**Version with markings to show amendments made:**

13. (twice amended) An article comprising a breathable foam layer formed by extruding a thermoplastic, amorphous polymer mixed with at least one blowing agent, the foam layer having at least one major surface, having porosity in a direction perpendicular to a major surface, and having a thickness of about 86 to about 265 microns, wherein foam cells are ruptured or enlarged by stretching the formed article thereby permanently increasing the moisture vapor transition rate of the article.